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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,608	12/02/2003	Hiroyuki Kometani	380-45	3708
23117 7590 01/03/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER SERGENT, RABON A	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 01/03/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/724,608	Applicant(s) KOMETANI ET AL.	
	Examiner Rabon Sergeant	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on October 30, 2007 and December 17, 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20,23,24 and 26-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20,23,24 and 26-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/973,747.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on October 30, 2007 and December 17, 2007 have been entered.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 20, 23, 24, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagio et al. ('104) in view of Laas et al. ('044) and Nakamura et al. ('034) and Hannah et al. ('659).

Hagio et al. disclose the use of salts of cycloamidines, such as applicants' claimed DBU, DBN, and DBD, as catalysts for polyurethane compositions. Patentees further disclose that the

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aforementioned salts can be produced from the reaction of the aforementioned cycloamidines with unsaturated acids, such as crotonic acid, acrylic acid, and ricinoleic acid. See abstract; column 2; and column 3, lines 14-19.

4. In addition to the teachings of Hagio et al, Nakamura et al. disclose at column 5, lines 1-40, especially lines 1-4, that salts of DBU were known catalysts for polyurethanes, and Laas et al. disclose at column 4, line 65 through column 5, line 13 that bicyclic amidines corresponding to those of applicants were known catalysts for polyurethane yielding coating compositions. Though the aforementioned references fail to specifically recite the use of the catalysts within two-component isocyanate based systems, the use of salts of DBU and DBN within such systems was known at the time of invention, as evidenced by Hannah et al. at column 4, line 65 through column 5, line 27. Furthermore, since the salt forms in a one to one ratio of catalyst to acid, applicants' claimed ratio limitations are considered to be satisfied.

5. Therefore, in view of the aforementioned teachings, the position is taken that it would have been obvious to utilize salts derived from unsaturated acids and cyclic amidines, such as DBU, DBN, and DBD, in their art recognized capacity as catalysts for polyurethane and isocyanate based polymeric systems, and that it further would have been obvious to utilize the salts in virtually any type of polyurethane yielding system, including two-component systems. Lastly, the position is taken that the use of virtually any unsaturated acid to block the catalyst would have been obvious in view of the teachings of the references.

6. Applicants' responses of October 30, 2007 and December 17, 2007 have been considered; however, applicants' responses are insufficient to overcome the prior art rejection. Firstly, despite applicants' amendments, it is not seen that applicants' claims exclude blocked


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isocyanates or blocked isocyanate prepolymers. Furthermore, even if blocking agents were excluded, it is not seen that such an exclusion would serve to overcome the prior art, since one would reasonably expect from the teachings of the primary and secondary references and the general state of the art that the disclosed catalysts would catalyze the reaction of virtually any polyisocyanate-polyol reactant mixture. Therefore, the position is maintained that the instant claims fail to overcome the prior art rejection for essentially the same reasons as set forth previously. Secondly, applicants' explanation in the form of the 37 CFR 1.132 declaration of December 17, 2007 and the 37 CFR 1.132 declaration of June 7, 2006 have been considered; however, the explanation and declaration are insufficient to overcome the prior art rejection. The examiner has considered applicants' examples; however, it is not seen that applicants have provided showings commensurate in scope with the claims to rebut the *prima facie* case of obviousness. Despite applicants' arguments, applicants' claims and examples are not commensurate in scope in terms of catalyst species, acid species, quantities of reactants, quantities of catalyst, and ratios of catalyst to acid. It has been held that evidence of unexpected results, must pertain to the full extent of the subject matter being claimed. *In re Ackermann*, 170 USPQ 340; *In re Chupp*, 2 USPQ2d 1437; *In re Murch*, 175 USPQ 89. Accordingly, to overcome a *prima facie* case of obviousness, the claims must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. Furthermore, it has been held that a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288; *In re Kulling*, 14 USPQ2d 1056. Furthermore, to the extent that the examples and claims are commensurate in scope, it remains unclear that applicants' results are in fact unexpected. Firstly, it is unclear that comparative examples based upon the use of p-toluene

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sulfonic acid are particularly relevant, since p-toluene sulfonic acid was a known reaction inhibitor at the time of invention. This position is evidenced by the disclosure within Oertel at pages 96 and 97. One would expect that the use of such a component would retard reactivity and prevent viscosity increase. Secondly, it is unclear that the comparative examples based on the metal catalysts are relevant, since these examples are not representative of the closest available art. Lastly, with respect to the examples pertaining to the use of formic acid and ethylhexanoic acid, it is unclear that these results when compared to the results of the instant invention clearly indicate that the results of the examples of the invention are unexpected. It appears that each of these argued examples, both those of the invention and not, display to differing degrees a latent catalytic effect that would be expected of these catalytic systems. The position is taken that finding those combinations of acid and catalyst within the prior art that yield an optimal characteristic amounts only to the optimization of a result effect variable. In other words, one of ordinary skill in the art, in the course of routine experimentation, would have been able to select suitable acid blocked catalysts yielding optimum results, in terms of such properties as pot-life and viscosity increase. The position is maintained that the evidence of obviousness outweighs the evidence of non-obviousness.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.


RABON SERGENT
PRIMARY EXAMINER

R. Sergent
December 31, 2007